Remarks

Applicants have amended the claims to expedite prosecution of preferred embodiments. Applicants do not intend to abandon or waive their rights to any cancelled subject matter and reserve the right to pursue any such subject matter in a continuing application.

Specifically, claims 1-3, and 5-15 have been amended to make explicit that which was implicit, namely, that the claims are directed to isolated nucleic acids. Support for this amendment can be found throughout the specification, for example, at page 10, lines 9-14. Claim 1 has been further amended to an embodiment, wherein the fragment comprises SEQ ID NO: 3. Support for the amendment can be found, for example in the originally filed claim 4. Accordingly, claim 4 has been cancelled. Claim 3 has been amended to an embodiment, wherein the isolated DNA sequence consists of SEQ ID NO: 2. Claim 34 has been amended to include fragments that comprise SEQ ID NO: 3 and wherein the DNA sequence further comprise at the 3' end 1-51 nucleotides from SEQ ID 5. Support for this amendment can be found, for example in the originally filed claims 1 and 4. Accordingly, no new matter has been introduced by the amendments and their entry is respectfully requested.

Applicants now turn to the specific rejections.

The examiner rejected claims 1-3, 5-9, and 13 and 14 under 35 U.S.C. 101 as allegedly being directed non-statutory subject matter.

Applicants have amended the claims to make explicit that the claims are directed to isolated nucleic acids and cells.

Accordingly, Applicants respectfully submit that the rejection has been obviated.

The Examiner rejected claim 34 under 35 U.S.C. §112, first paragraph as allegedly not complying with the enablement requirement. Specifically, the Examiner contended that the specification does not provide sufficient support for use of the phrase "therapeutically effective amount" with respect to the vector. The Examiner also contended that because the claimed invention is directed to an effective promoter which in and of itself does not have therapeutic activity, the specification allegedly lacks the required teaching with respect the scope of the claim, i.e. with respect to all the nucleic acids that can be driven by the claimed novel promoter. Accordingly, citing unpredictability in the physiological art and the alleged difficulties in gene therapy trials, the Examiner alleges that claim 34 is not enabled.

Applicants respectfully disagree and submit that the rejection be withdrawn for the following reasons.

Claim 34 is not directed to gene therapy methods either *in vivo* or *in vitro*. The claim is directed to a pharmaceutical composition. Accordingly, what the specification must teach are the components of the composition. This goal is fully accomplished by the specification. The specification teaches a DNA sequence encoding the human IL- 18BP functional promoter encoded by SEQ ID NO: 1 (page 4, lines 4-7)

The specification further teaches a functional human IL-18BP promoter activity containing fragment or a functional human IL-18BP promoter activity containing derivatives of IL-18BP promoter, wherein the functional human IL-18BP promoter activity containing fragment or the functional human IL-18BP promoter activity containing derivative thereof comprise SEQ ID NO: 3 and wherein the 3' end of said DNA sequence or fragment thereof comprises one to 51 nucleotides from the 5' end of SEQ ID NO: 5 (page 4, lines 4-7)

The specification teaches that the promoter drives constitutive expression of IL-18BP in, for example, monocytes, and IFN-gamma inducible expression in many other cells (page 8, lines 19-23). Thus, a skilled artisan would know that one can use the composition in two contexts, in inducible expression and constitutive expression models.

The specification also teaches that the cells and tissues, where IL-18BP is expressed include, for example, leukocytes, colon, small intestine, prostate, spleen, macrophages, lymphocytes, and plasma cells (page 2, lines 26-29). Thus, a skilled artisan would know which tissues/cells can be targeted using the promoter composition as described.

The specification further teaches a variety of examples of heterologous proteins that a skilled artisan can use the promoter to drive (page 4, lines 12-16). Applicants respectfully submit that knowing the qualities of the claimed promoter construct, a skilled artisan would be able to readily insert any gene, therapeutic or not, as the heterologous gene and expect that the gene be expressed in certain cells and either under inducible on constitutive manner. Given that the specification gives particular guidance with respect to cells and heterologous proteins, selection of a particular gene would not require particularly high skill from the artisan.

The specification also teaches various preferred vectors (page 4, lines 21-25). Accordingly, a skilled artisan would be able to readily make a vector construct with a desired vector for a specific application.

There is nothing unpredictable about putting together and using a composition comprising the claimed components. A skilled artisan with even elementary gene manipulation skills based upon the above-identified teachings can put together the claimed composition.

Applicants respectfully submit that using a pharmaceutical composition with a specific type of vector is a routine task. As mentioned above, the claims are not directed to therapeutic methods. Based on the guidance given at pages 19-23, a skilled artisan would know how and where the claimed composition has specific uses and possible uses, and thus would clearly know how to use the promoter.

In view of the amendments and the discussion above, Applicants respectfully submit that claim 34 fully complies with 35 U.S.C. §112, first paragraph, enablement requirement.

The Examiner rejected claims 1-3 and 5-9 under 35 U.S.C. §102(b) as allegedly anticipated by Entrez Nucleotide Database entry for Accession No. AF110798.

Applicants respectfully disagree. The database entry does not identify the promoter region as such. Moreover, the claims are directed not only to the promoter region or fragments thereof, but to a sequence comprising the promoter region or a fragment thereof that has promoter activity and that at the 3' end also contains at least one base pair of from SEQ ID NO: 5, which is not normally part of the promoter, it contains 50 bp downstream of the transcription start site and is an exon. Applicants surprisingly found that by adding at least one nucleic acid from SEQ ID NO: 5 contributed significantly to the responsiveness of the reporters to IFN-γ. This is explicitly discussed in example 5. Applicants also bring to the Examiner's attention a publication by the inventors that further elaborated on this issue (Hurgin et al., Proc. Natl. Acad. Sci. Vol. 99, No. 25, pp. 1657-1692).

However, to expedite prosecution of a preferred embodiment, Applicants have amended the claims to an embodiment wherein the fragment comprises SEQ ID NO: 3.

Entrez Nucleotide Database entry for Accession No. AF110798 does not disclose the sequence of SEQ ID NO: 3.

Accordingly, in view of the amendment, Applicants respectfully submit that the rejection has been rendered moot.

The Examiner also rejected claims 1-3, 7, 9, 10 and 12 under 35 U.S.C. 102(b) as allegedly being anticipated by Hurgin et al. ("Hurgin").

While Applicants respectfully disagree, to expedite prosecution of a preferred embodiment, Applicants have amended claim 1 to an embodiment wherein the fragment comprises SEQ ID NO: 3.

In view of the amendment, Applicants respectfully submit that the rejection has been rendered moot.

The Examiner further rejected claims 1, 2, 7, 9, 11-14, 17-19 and 34 under 35 U.S.C. 102(b) as allegedly being anticipated by EP 0 546 333 A1 to Oda et al. ("Oda").

While Applicants respectfully disagree, to expedite prosecution of a preferred embodiment, Applicants have amended claim 1 to an embodiment wherein the fragment comprises SEQ ID NO: 3.

In view of the amendment, Applicants respectfully submit that the rejection has been rendered moot.

The Examiner rejected claims 13-15 under 35 U.S.C. 103(a) as allegedly being unpatentable over Hurgin in view of Guan et al. ("Guan").

While Applicants respectfully disagree, to expedite prosecution of a preferred embodiment, Applicants have amended claim 1 to an embodiment wherein the fragment comprises SEQ ID NO: 3.

Neither Hurgin nor Guan describe the specific sequence of SEQ ID NO: 3. Accordingly, in view of the amendment, Applicants respectfully submit that the rejection has been rendered moot.

The Examiner rejected claims 11 and 18 under 35 U.S.C. 103(a) as allegedly being unpatentable over Oda in view of U.S. Patent No. 4,966,843 to McCormick et al. ("McGormick").

While Applicants respectfully disagree, to expedite prosecution of a preferred embodiment, Applicants have amended claim 1 to an embodiment wherein the fragment comprises SEQ ID NO: 3.

Neither Oda nor McGormick describe the specific sequence of SEQ ID NO: 3. Accordingly, in view of the amendment, Applicants respectfully submit that the rejection has been rendered moot.

In view of the foregoing, Applicants respectfully submit that all claims are in condition for allowance. Early and favorable action is requested.

In the event that any additional fees are required, the Commissioner is hereby is authorized to charge our deposit account No. 50-0850.

Date: May 6, 2008

Respectfully submitted,

/Leena H. Karttunen/

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